

**IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

UNITED STATES OF AMERICA,

v.

ANTHONY D. BRESSI,

Defendant.

No. 4:19-CR-00207-01

(Chief Judge Brann)

**MEMORANDUM OPINION**

**JULY 3, 2024**

Currently pending before the Court is Defendant Anthony Bressi's *Daubert* Motion to exclude the expert testimony of Government experts Joesph Bozenko and Rebecca Patrick. The Court easily concludes that Bozenko and Patrick are qualified and that their opinions fit the facts of this case and are grounded in reliable methods and principles. The Court's adjudication of Bressi's Motion is only made difficult by the Government's repeated failures to comply with the Federal Rules of Criminal Procedure and Orders of this Court. While the Court largely denies Bressi's Motion, the Court finds that the Government's noncompliance denied Bressi fair notice and opportunity to challenge certain opinions and grants his Motion in part.

**I. PROCEDURAL BACKGROUND**

On June 27, 2019, a grand jury indicted Defendants Anthony Bressi, Damonico Henderson, and Terry Harris, charging them collectively with conspiracy to manufacture, distribute, and possess with intent to distribute controlled substances

(Count I), and individually with possession with the intent to distribute controlled substances (Bressi – Count II; Henderson – Count III; Harris – Count IV).<sup>1</sup> The Defendants pleaded not guilty.<sup>2</sup> Bressi’s *Daubert* Motion is the second such Motion. Bressi’s co-Defendant, Damonico Henderson filed the first *Daubert* Motion in July 2023.<sup>3</sup> In support of his Motion, which his co-Defendants joined,<sup>4</sup> Henderson argued that the Government’s expert witness disclosures of September 26, 2022<sup>5</sup> were deficient under recently-amended Federal Rule of Criminal Procedure 16. Though the Court agreed with Henderson that the disclosures were deficient, it found that precluding the Government from introducing expert testimony altogether was too harsh a sanction under the circumstances—in particular, that the Government’s disclosure was filed before the amendments to Rule 16 went into effect and that Defendants had been no more diligent in seeking relief.<sup>6</sup> In lieu of granting the Motion, the Court required the Government to file new expert disclosures which comported with the requirements of Rule 16.<sup>7</sup>

On December 1, 2023, the Government filed a new Rule 16 disclosure identifying Rebecca Patrick, Joseph Bozenko, Brandy Pulfer, Joseph Stephens, and

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<sup>1</sup> Indictment, Doc. 16.

<sup>2</sup> Doc. 22 (Harris Not Guilty Plea); Doc. 28 (Bressi Not Guilty Plea); Doc. 38 (Henderson Not Guilty Plea).

<sup>3</sup> First *Daubert* Mot., Doc. 291.

<sup>4</sup> Bressi Notice of Joinder, Doc. 295; Harris Notice of Joinder, Doc. 296.

<sup>5</sup> First Expert Disclosures, Doc. 231.

<sup>6</sup> *See generally* Nov. 3, 2023 Mem. Op., Doc. 304.

<sup>7</sup> Nov. 3, 2023 Ord., Doc. 305.

Krystal Watts as experts it expected to offer at trial.<sup>8</sup> While the new disclosures referred to each experts' reports, it also described the basis of each witnesses' opinions, in part, with some variation of the same boilerplate language:

[The witness is] expected to testify that she applied scientifically accepted techniques and testing methods, as well as her knowledge, skill, experience, training, and education, to reach the opinions stated in her report.<sup>9</sup>

Accordingly, Henderson renewed his Motion, again joined by his co-Defendants.<sup>10</sup> Bressi also independently filed a brief highlighting specific concerns regarding the proffered testimony of Mr. Bozenko and Ms. Patrick. Concerned that the Government intended to rely on the above boilerplate, "catch-all" language and its "continuing discovery obligations" to elicit improperly disclosed testimony at trial, the Court granted Defendants' Motion for a *Daubert* Hearing.<sup>11</sup> The Court also discussed the Government's disclosure of John Orlando, who would testify regarding cell-site location analysis. The Government suggested that Orlando's testimony would not rise to the level of expert testimony, and that Orlando was included for the purpose of giving notice of his testimony "to the extent it relates to any special skill and training he may possess."<sup>12</sup> While the impulse to be

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<sup>8</sup> Second Expert Disclosures, Doc. 306. The Government also disclosed non-expert John Orlando.

<sup>9</sup> Second Expert Disclosures at 3, 5, 10, 13, 14, 16.

<sup>10</sup> Second *Daubert* Mot., Doc. 307; Bressi Notice of Joinder, Doc. 307; Harris Notice of Joinder, Doc. 311.

<sup>11</sup> Feb. 1, 2024 Mem. Op. and Ord., Docs. 317-18.

<sup>12</sup> Doc. 317, at 4.

overinclusive is understandable, Rule 16 requires the disclosure of “a *complete* statement of all opinions that the government will elicit from the witness.”<sup>13</sup> Thus, general boilerplate or “expert-lite” disclosures are of limited utility.<sup>14</sup> On the contrary, they inject uncertainty and raise the specter that improperly disclosed testimony will be elicited at trial.

To resolve any uncertainty and the specific concerns identified by the Defendants, the Court held a *Daubert* hearing on April 22, 2024. Prior to the hearing, Bressi’s co-Defendants pleaded guilty to Count I of the Indictment.<sup>15</sup> Therefore, only Bressi participated in the hearing.

At the outset, Bressi and the Government informed the Court that they had agreed to stipulations regarding the testimonies of Brandy Pulfer, Joseph Stephens and Erik Carpenter, who would be replacing Krystal Watts. As to Stephens, Bressi objected to the extent that he would testify that Aniline, which he identified through testing of physical evidence recovered by law enforcement, is a precursor to the manufacture of fentanyl. However, the Government represented that Stephens would not testify that Aniline is a precursor, only that his testing found that he identified Aniline among the evidence recovered from the lab. With that understanding, the parties stipulated to the admissibility of Stephens’ testimony regarding his testing

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<sup>13</sup> Fed. R. Crim. P. 16(a)(G)(iii) (emphasis added).

<sup>14</sup> Doc. 317, at 6.

<sup>15</sup> Ords. Entering Guilty Pleas, Doc. 327 (Harris); Doc. 331 (Henderson).

and identification of the substance. As to Watts, the Government informed the Court that she had subsequently relocated and would be replaced by a different witness. Bressi, pending receipt of disclosures of the Carpenter's testimony, stipulated to its admissibility to the extent that it was consistent with Watts' report.

As only Bressi's challenges to Bozenko and Patrick remain, only those witnesses testified at the hearing.<sup>16</sup> The Court invited the parties to submit, and they did submit supplemental briefing regarding issues raised at the hearing.<sup>17</sup> Bressi's Motion is ripe for disposition.

## **II. FACTUAL BACKGROUND**

The Court assumes the parties' familiarity with the alleged factual background for the Indictment, a detailed recitation of which can be found in this Court's prior Opinions.<sup>18</sup> Accordingly, the Court only briefly recounts the facts relevant to the pending Motion.

In the summer of 2016, the Federal Bureau of Investigation began investigating the financial dealings of Anthony Bressi, an ex-convict who served extended prison sentences for manufacturing explosives and methamphetamine. Following his release from prison in 2014, Bressi formed a limited liability company

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<sup>16</sup> The Court will dismiss as moot Bressi's Motion as to the remaining experts accordingly.

<sup>17</sup> Docs. 348, 349.

<sup>18</sup> Apr. 19, 2023 Mem. Op., Doc. 290, Section I.A. The factual background as recited herein is derived from the more detailed recitation in the Court's April 19, 2023 Memorandum Opinion and incorporates the record citations from that Opinion unless otherwise noted.

named SHIVA Science & Technology Group LLC. Certain financial transactions made by Bressi which involved business accounts Bressi set up for SHIVA and his personal account—transactions which appeared to be structured to avoid bank reporting requirements and transactions involving large amounts of cash—arose suspicion at the FBI and Bressi’s bank.

The FBI officially opened its investigation into Bressi, his co-Defendants, and SHIVA’s business in 2018. According to SHIVA’s website, the company was involved in “Tech Developments” and “Consulting & Custom Solutions.” SHIVA claimed to be “in the process of developing some world-changing technologies in fields as diverse as energy, medicine, beverages, communications, entertainment, aerospace, transportation, chemistry, robotics, artificial intelligence, and defense.” SHIVA described itself as “Sci-Fi Realized” because “many of its products do just that—turn science fiction into science fact.”

In truth, SHIVA was long on fiction and short on fact. In reviewing SHIVA’s business banking records, the FBI found that SHIVA had been purchasing equipment and chemicals consistent with the production of illegal drugs. Though many of the chemicals had legitimate uses, the FBI found that SHIVA had purchased “3-Methyl-1-phenethylpiperidin-4-one,” which Joseph Bozenko, a forensic chemist with the Drug Enforcement Administration stated had no legitimate, licit use.<sup>19</sup>

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<sup>19</sup> Doc. 297-1, at 8.

Following these discoveries, in November 2018, the FBI conducted a “trash pull” from a dumpster on SHIVA’s commercial property. Inside the trash bags, the FBI found, among other items, two empty glass bottles of the chemical “Aniline” and a white laboratory coat stained with residue of Aniline and 4-Anilinopiperidine. Bozenko and an FBI chemist informed the investigatory team that these chemicals are precursors used in the synthesis of fentanyl and fentanyl analogues,<sup>20</sup> and that the identification of the two chemicals on the lab coat were convincing evidence of fentanyl synthesis.

After several months of further investigation, the Government sought and obtained a search warrant for the SHIVA property and Bressi’s home in Danville, Pennsylvania. Pennsylvania State Police forensic chemist Rebecca Patrick participated in the search of SHIVA. Accompanied by nine state troopers and a second forensic chemist, Patrick donned a “Level A ensemble”—a fully encapsulated suit with a breathing apparatus—to prevent the inhalation or absorption through the skin of chemicals which could be present at a suspected clandestine drug laboratory.<sup>21</sup>

First, Patrick and other law enforcement personnel on the scene did an initial assessment and attempted to stop any active reactions that were occurring.<sup>22</sup> Then

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<sup>20</sup> See *id.* at 9 (Bozenko emailing FBI agent Tim O’Malley that Aniline is used to make fentanyl).

<sup>21</sup> *Daubert* Hr’g. Tr., Doc. 338, 124:4-14.

<sup>22</sup> *Id.* at 124:12-16.

Patrick and law enforcement took a video, pictures, and began to dismantle the lab.<sup>23</sup>

Due to the volume of chemicals at SHIVA, it was not feasible to preserve the entirety of the inventory at the lab.<sup>24</sup> Therefore, the decision was made to take samples of each chemical to be tested at Patrick's laboratory.<sup>25</sup> Patrick did preserve the entire contents of a 20 liter flask which testing revealed contained 848.7 grams of acetyl fentanyl.<sup>26</sup>

Back at her laboratory, Patrick tested the samples, identifying each chemical. To do so, Patrick used gas chromatography-mass spectrometry, and compared the results to those of known samples, referred to as a "standard," tested on the same machine.<sup>27</sup> If Patrick did not have a "library sample"—results from a standard previously tested on her equipment—she ordered a standard to be tested accordingly.<sup>28</sup> In certain cases, Patrick would send samples which did not match information in the PSP libraries to the DEA, to confirm that the sample could not be identified.<sup>29</sup> The identifiable chemicals formed the basis of Patrick's report and conclusion that the SHIVA lab was "capable of producing fentanyl, acetyl fentanyl, and carfentanil."<sup>30</sup> As a supplement to her Report, Patrick also created a slide deck,

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<sup>23</sup> *Id.* at 124:16-21.

<sup>24</sup> *Id.* at 124:22-125:2.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 130:19-22.

<sup>27</sup> *Id.* at 132:20-133:19.

<sup>28</sup> *Id.* at 133:10-12.

<sup>29</sup> *Id.* at 134:13-19.

<sup>30</sup> *Id.* at 132:6-10; Patrick Report, Doc. 306-4, at 4-5.



in which she identified various methods in which the chemicals found at SHIVA could be used to synthesize illicit substances.<sup>31</sup>

### **III. CHALLENGED TESTIMONY**

#### **A. Joseph Bozenko**

##### **1. Qualifications**

Joseph Bozenko is a Senior Research Chemist with the with the United States Drug Enforcement Administration's special testing and research laboratory, where he has held various similar roles for twenty-four years.<sup>32</sup> He has been "Clandestine Lab Certified" by the DEA since 1999.<sup>33</sup> He is also affiliated with the DEA Special Operations Division where he is a scientific advisor to transnational investigations for over twenty U.S. government agencies.<sup>34</sup> Bozenko has a bachelor's and a master's degree in chemistry.<sup>35</sup> He also has participated in ongoing professional training, both as a student and as an instructor, including as a professor in chemistry.<sup>36</sup>

##### **2. Testimony**

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<sup>31</sup> *E.g.*, Tr. 140:11-153:14.

<sup>32</sup> *Id.* 11:11-22; Doc. 306, at 6.

<sup>33</sup> Second Expert Disclosures at 7.

<sup>34</sup> *Id.* at 6.

<sup>35</sup> *Id.* at 7; Tr. 12:12-19.

<sup>36</sup> Second Expert Disclosures at 7; Bozenko CV, Doc. 306-5.

Bozenko is expected to testify that several identified chemicals ordered by Bressi “are precursors to the manufacture of fentanyl and fentanyl analogues.”<sup>37</sup> He is also expected to testify that several other identified chemicals “are solvents and reagents that have a wide array of applications (including licit and illicit uses).”<sup>38</sup> “Bozenko will testify that the chemical 3-methyl-1-phenethylpiperidin-4-one is a precursor to the fentanyl analogue 3-methylfentanyl, that it is closely related to NPP (a list I fentanyl precursor) and that in his opinion aniline and propionyl chloride (or propionic anhydride) would also be required to make 3-methylfentanyl. Mr. Bozenko will testify that he knows of no licit uses for 3-methyl-1-phenethylpiperidin-4-one.”<sup>39</sup>

At the hearing, the Government emphasized its position that Bozenko’s “testimony is more along the lines of expert facts, rather than expert opinions.”<sup>40</sup> The Government suggests that such “expert facts”—i.e., that certain chemicals are used in the manufacture of fentanyl—are not opinions, but “specialized scientific fact.”<sup>41</sup> The Government concedes that if Bozenko testified “when all of these three or four or a dozen chemicals are together, in my opinion, this [more strongly] suggests the manufacture of fentanyl than simply the presence of Aniline, which could be used

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<sup>37</sup> Second Expert Disclosures at 7-8, 10.

<sup>38</sup> *Id.* at 8-9.

<sup>39</sup> *Id.* at 9.

<sup>40</sup> Tr. 10:5-7.

<sup>41</sup> *Id.* at 196:1-19.

for a legal purpose,” such testimony would cross the line “from expert facts to an expert opinion.”<sup>42</sup>

Relatedly, “Bozenko is also expected to testify as a factual matter to admissions made by Bressi in an interview of Bressi by Bozenko and others in September 2019” as well as his role in advising Special Agent Timothy O’Malley during his investigation.<sup>43</sup> Such testimony, the Government asserts, “is plainly factual” and independent from any expert opinion testimony.<sup>44</sup>

## **B. Rebecca Patrick**

### **1. Qualifications**

Rebecca Patrick is a Forensic Scientist 2 with the Pennsylvania State Police, where she has been a forensic scientist for twenty-two years.<sup>45</sup> She is also a Clandestine Lab Team Coordinator.<sup>46</sup> In that position, which she has held for fifteen years, she is tasked with responding to suspected clandestine drug lab operations, conducting training sessions, and preparing written reports detailing the results of her testing on evidence.<sup>47</sup> She is also a Hazmat Specialist on the Lehigh County Special Operations team where she responds to area hazardous material

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<sup>42</sup> *Id.* at 195:20-25.

<sup>43</sup> Second Expert Disclosures at 10.

<sup>44</sup> Tr. 194:18-25.

<sup>45</sup> *Id.* 111:1-5; Second Expert Disclosures at 3.

<sup>46</sup> Second Expert Disclosures at 4; Tr. 111:19-25.

<sup>47</sup> Second Expert Disclosures at 4; Tr. 111:19-25.

emergencies.<sup>48</sup> For the past twenty years, she has trained emergency responders at Bucks County Community College.<sup>49</sup> Her curriculum vitae details extensive ongoing training related to the above.<sup>50</sup> Patrick received a Bachelor of Science Degree in Chemistry from Bucknell University.<sup>51</sup> She has testified as an expert witness in dozens of cases in state and federal court.<sup>52</sup>

## **2. Testimony**

Patrick is expected to testify regarding the conclusions of her Report in which she tested and identified several samples of substances found during the search of the SHIVA lab.<sup>53</sup> She is also expected to testify regarding her conclusions that the identified substances could be used to synthesize fentanyl, acetyl fentanyl, and carfentanil.<sup>54</sup> Accordingly, she is expected to testify that SHIVA “was a synthesis laboratory capable of producing fentanyl, acetyl fentanyl, and carfentanil.”<sup>55</sup>

## **IV. LAW**

### **A. Federal Rule of Criminal Procedure 16**

Federal Rule of Criminal Procedure 16 was amended in 2022 to “address[] two shortcomings of the prior provisions on expert witness disclosure: the lack of

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<sup>48</sup> Second Expert Disclosures at 4.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*; Patrick CV, Doc. 306-3.

<sup>51</sup> Patrick CV 1.

<sup>52</sup> Tr. 114:8-25.

<sup>53</sup> *Id.* at 4-5; Patrick Report 2-4.

<sup>54</sup> Second Expert Disclosures at 5; Patrick Report 4-5.

<sup>55</sup> Second Expert Disclosures at 5 (quoting Patrick Report at 5).

adequate specificity regarding what information must be disclosed, and the lack of an enforceable deadline for disclosure.”<sup>56</sup> Previously, Rule 16 required that the government provide “a written summary of the expert witness testimony the government expected to use in its case-in-chief at trial.”<sup>57</sup> Rule 16 now requires that the government provide: (1) a “complete statement of all opinions the government will elicit from the witness;” (2) “the bases and reasons for them;” (3) “the witness’s qualifications, including a list of all publications authored in the previous 10 years;” and (4) a list of cases in which the witness has testified as an expert in the prior 4 years.<sup>58</sup> The statement of the witness’ opinions “does not require a verbatim recitation of the testimony the expert will give at trial.”<sup>59</sup>

## **B. Federal Rule of Evidence 702**

Federal Rule of Evidence 702 requires that expert testimony is (1) qualified, (2) reliable, and (3) assists the trier of fact.<sup>60</sup> “Before the proposed testimony gets presented to the jury, the trial judge evaluates its admissibility based on these three requirements.”<sup>61</sup> “Where the admissibility of expert testimony is specifically questioned, Rule 702 and *Daubert* require that the district court make explicit

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<sup>56</sup> Fed. R. Crim. P. 16, Advisory Comm. Notes 2022 Amendments.

<sup>57</sup> Wright & Miller, Federal Practice & Procedure Criminal § 255 (4th ed. 2023).

<sup>58</sup> Fed. R. Crim. P. 16(a)(1)(G)(iii).

<sup>59</sup> Fed. R. Crim. P. 16, Advisory Comm. Notes 2022 Amendments.

<sup>60</sup> *UGI Sunbury LLC v. A Permanent Easement for 1.7575 Acres*, 949 F.3d 825, 832 (3d Cir. 2020).

<sup>61</sup> *U.S. v. Schiff*, 602 F.3d 152, 172 (3d Cir. 2010).

findings, whether by written opinion or orally on the record, as to the challenged preconditions to admissibility.”<sup>62</sup>

“Qualification requires ‘that the witness possess specialized expertise.’”<sup>63</sup> Rule 702’s qualification requirement is to be liberally construed.<sup>64</sup> The United States Court of Appeals for the Third Circuit has instructed that courts should “eschew[] overly rigorous requirements of expertise and [be] satisfied with more generalized qualifications.”<sup>65</sup> Accordingly, “it is an abuse of discretion to exclude testimony simply because the trial court does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate.”<sup>66</sup> A “broad range of knowledge, skills, and training” suffice to qualify an expert.<sup>67</sup>

“Rule 702’s reliability threshold requires expert testimony to be ‘based on methods and procedures of science, not on subjective belief and unsupported speculation.’”<sup>68</sup> The opinion of a qualified expert “is admissible so long as

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<sup>62</sup> *Sardis v. Overhead Door Corp.*, 10 F.4th 268 (4th Cir. 2021) (citing *United States v. Ruvalcaba-Garcia*, 923 F.3d 1183, 1190 (9th Cir. 2019); *Carlson v. Bioremedi Therapeutic Sys., Inc.*, 822 F.3d 194, 201 (5th Cir. 2016); *Gayton v. McCoy*, 593 F.3d 610, 616 (7th Cir. 2010)).

<sup>63</sup> *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008) (quoting *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir.2003)).

<sup>64</sup> *Id.* (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741 (3d Cir. 1994)).

<sup>65</sup> *Paoli*, 35 F.3d at 741 (citing *Hammond v. International Harvester Co.*, 691 F.2d 646, 652–53 (3d Cir. 1982); *Knight v. Otis Elevator Co.*, 596 F.2d 84, 87–88 (3d Cir. 1979)).

<sup>66</sup> *Id.* (quoting *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 782 (3d Cir. 1996)).

<sup>67</sup> *Pineda*, 520 F.3d at 244 (quoting *Paoli*, 35 F.3d at 741).

<sup>68</sup> *UGI Sunbury*, 949 F.3d at 833–34 (quoting *Karlo v. Pittsburgh Glass Works, LLC*, 849 F.3d 61, 80 (3d Cir. 2017); *In re TMI Litig.*, 193 F.3d 613, 703 (3d Cir. 1999)).

the *process or technique* [as opposed to the conclusion] the expert used in formulating the opinion is reliable.”<sup>69</sup> Therefore, parties offering expert testimony do not “have to prove their case twice—they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are *correct*, they only have to demonstrate by a preponderance of evidence that their opinions are reliable.”<sup>70</sup> “The reliability of an expert’s conclusions and opinions hinges on the reliability of the expert’s methodology.”<sup>71</sup>

Nevertheless, because “expert evidence can be both powerful and quite misleading,”<sup>72</sup> courts have recognized that “the importance of the gatekeeping function cannot be overstated.”<sup>73</sup> A recent amendment to Rule 702 “clarif[ied] and emphasize[d] that expert testimony may not be admitted unless the proponent demonstrates to the court that it is more likely than to that the proffered testimony meets the admissibility requirements set forth in the rule.”<sup>74</sup> The amendment was motivated by the Advisory Committee’s “observation that in ‘a number of federal cases . . . judges did not apply the preponderance standard of admissibility to Rule 702’s requirements of sufficiency of basis and reliable application of principles and

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<sup>69</sup> *In re TMI Litig*, 193 F.3d at 664 (citing *Paoli*, 35 F.3d at 742) (emphasis in original).

<sup>70</sup> *Paoli*, 35 F.3d at 744.

<sup>71</sup> *Wood v. Showers*, 822 F. App’x 122, 124 (3d Cir. 2020) (citing Fed. R. Evid. 702(c)).

<sup>72</sup> *Sardis*, 10 F.4th at 283 (quoting *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592 (1993)).

<sup>73</sup> *Id.* (quoting *United States v. Barton*, 909 F.3d 1323, 1331 (11th Cir. 2018)).

<sup>74</sup> Fed. R. Evid. 702, Advisory Comm. Notes, 2023 Amendments.

methods, instead holding that such issues were ones of weight for the jury.”<sup>75</sup> The Committee emphasized that rulings which have held “the critical questions of the sufficiency of an expert’s basis for his testimony, and the application of the expert’s methodology, are generally questions of weight and not admissibility” “are an incorrect application of Rules 702 and 104(a).”<sup>76</sup>

The issue of whether an expert’s testimony will assist the trier of fact “is typically understood in terms of whether there is a sufficient ‘fit’ between the expert’s testimony and the facts that the jury is being asked to consider.”<sup>77</sup> In assessing whether an expert’s proposed testimony “fits,” courts ask “whether [the] expert testimony proffered . . . is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.”<sup>78</sup>

## V. DISCUSSION

Bressi’s objections to the proffered testimony of Bozenko and Patrick fall into three categories: 1) the Government’s belated disclosure of certain materials and

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<sup>75</sup> *Sardis*, 10 F.4th at 283-84 (quoting Advisory Comm. on Evidence Rules, *Agenda for Committee Meeting* 17 (Apr. 30, 2021)).

<sup>76</sup> *Id.* at 284 (quoting Advisory Comm., *Agenda* at 105, 107). *See also Wood v. Showers*, F. App’x 122, 125 (3d Cir. 2020) (rejecting argument that flaws in the reliability of an expert’s principles and methods are a question for the jury); *Kumho Tire*, 526 U.S. at 158-59 (Scalia, J. concurring) (“[T]rial-court discretion in choosing the manner of testing expert reliability . . . is not discretion to abandon the gatekeeping function . . . [and] it is not discretion to perform the function inadequately.”)

<sup>77</sup> *Schiff*, 602 F.3d at 172-73 (citing *Daubert*, 509 U.S. at 591).

<sup>78</sup> *Id.* (quoting *Daubert*, 509 U.S. at 591; *United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985)).



information violates Rule 16 and Orders of this Court;<sup>79</sup> 2) certain of Bozenko’s and Patrick’s opinions are beyond the scope of their expertise;<sup>80</sup> and 3) certain of the methods Patrick relies upon are unreliable.<sup>81</sup> The Court addresses each in turn.

#### **A. Untimely Disclosures**

At the outset of its direct examination of Bozenko during the hearing, the Government notified the Court that Bozenko would testify that he relied upon a publication of the United Nations Office on Drugs and Crime, *Clandestine Manufacture of Substances Under International Control*.<sup>82</sup> As described by the United Nations, *Clandestine Manufacture*, also referred to by the parties as “the UN Book,” “has been prepared as a working reference tool for use by national law enforcement authorities and personnel of drug testing laboratories, drawing on reviews supplied by national authorities as well as on available literature.”<sup>83</sup> The manual “is guarded by the DEA and is not suitable for general dissemination” as it, among other things, “describes how to make drugs” including, as relevant here, “recipes for how to make fentanyl.”<sup>84</sup> Accordingly, though the Government had “no objection to [Bressi’s counsel] reviewing this book, even reviewing this book over

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<sup>79</sup> Doc. 348, Section II.

<sup>80</sup> *Id.* at 6-8.

<sup>81</sup> *Id.* at 9-11.

<sup>82</sup> *E.g.*, Tr. 41:8-42:3.

<sup>83</sup> United Nations Office on Drugs and Crime, *Clandestine Manufacture of Substances Under International Control* (accessed June 28, 2024), [https://www.unodc.org/unodc/en/scientists/ clandestine-manufacture-of-substances-under-international-control\\_new.html](https://www.unodc.org/unodc/en/scientists/ clandestine-manufacture-of-substances-under-international-control_new.html).

<sup>84</sup> Tr. 44:1-8.

a lunch break to satisfy herself . . . that it is a reliable source for Mr. Bozenko to use,” the Government objected to any reproduction of the manual which could result in the contents coming into the possession of Bressi himself.<sup>85</sup>

Bressi’s counsel objected that the Government’s belated disclosure of the manual was untimely and, therefore, violative of the Court’s Order.<sup>86</sup> Further, counsel argued that review of the materials, which included diagrams of chemical synthesis, over a lunch break would be of little utility in helping her cross examine Bozenko.<sup>87</sup> Counsel suggested that, had timely disclosures been made, the parties could have come to an agreement regarding appropriate safeguards by which counsel could have conducted, with the assistance of an expert or someone well-versed in organic chemistry, a review of the relevant materials.<sup>88</sup>

The Government waived away Bressi’s objection as much ado about nothing, asserting that “there can’t really be a question about” the reliability of a publication of the United Nation’s Office on Drugs and Crime.<sup>89</sup>

As the Court observed at the time, the Government represented that *Clandestine Manufacture* was, “one publication that the witness relied on, amongst others,” in forming his opinion in this case.<sup>90</sup> Whether Bressi’s objection had merit—

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<sup>85</sup> *Id.* at 42:11-15.

<sup>86</sup> *Id.* at 42:21-43:19.

<sup>87</sup> *Id.* at 43:20-23.

<sup>88</sup> *Id.* at 43:3-23.

<sup>89</sup> *Id.* at 43:24-44:20.

<sup>90</sup> *Id.* at 45:21-24.

that is, whether the Government’s failure to disclose Bozenko’s reliance on the *Clandestine Manufacture* constituted a violation of the Court’s Order—turns on the role it played in Bozenko’s analysis. Therefore, the Court overruled Bressi’s objection at the hearing, allowing the Government to present Bozenko with the book and elicit the relevant testimony.<sup>91</sup> The Court further directed the Government to provide Bressi’s counsel with the relevant excerpts.<sup>92</sup>

In his supplemental brief, Bressi maintains his objection that “the failure to indicate that the Government would be presenting the ‘UN Book’ as referred to on the record or that Bozenko relied upon it for his opinion prior to the hearing violates Rule 16.”<sup>93</sup> Bressi also asserts that “Patrick’s testimony was supported by reports unavailable to counsel which were provided to counsel during the lunch break.”<sup>94</sup>

The Government’s argument that “there can’t really be any question” about the reliability of the belatedly disclosed materials misses the point. The Government bears the burden of proving by a preponderance of the evidence that the underlying principles are *both* “1) reliable *and* 2) reliably applied.”<sup>95</sup> Even if the Court agrees

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<sup>91</sup> *Id.* at 48:18-22.

<sup>92</sup> *Id.*

<sup>93</sup> Doc. 348, at 3.

<sup>94</sup> *Id.* at 4. *See also* Tr. 166:1-5 (question regarding “additional sources . . . shared . . . over the lunch break”).

<sup>95</sup> *In re Zolofit (Sertraline Hydrochloride) Products Liab. Litig.*, 858 F.3d 787, 796 (3d Cir. 2017) (emphasis added). *See also* Fed. R. Evid. 702(c)-(d) (“A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that: . . . the testimony is the product of reliable principles and methods; *and* the expert’s opinion reflects a reliable application of the principles and methods to the facts of the case.”).

that the principles and methods of *Clandestine and Manufacture* and other belatedly disclosed materials are unquestionably reliable, that satisfies only the first step of the reliability inquiry. It says nothing about whether the experts reliably applied those principles and methods.

The Government has had ample opportunity to perfect its expert disclosures. In September 2022, the Government filed its first expert disclosure over three years after Bressi's co-Defendants filed a notice requesting the disclosure of expert testimony.<sup>96</sup> Defendants moved to exclude the expert testimony in July 2023 for failure to comply with Rule 16.<sup>97</sup> The Court denied that motion, finding that the Government's initial failure to comply with Rule 16 was excusable where the amendment had gone into effect months after the initial disclosure.<sup>98</sup> In lieu of granting Defendants' Motion, the Court required the Government to file new expert disclosures by December 1, 2023.<sup>99</sup>

Following those disclosures, Defendants renewed their objections, arguing that the Government, given a second bite at the apple, had still failed to comply with Rule 16.<sup>100</sup> The Court agreed. Relevant here, the Court noted that the Government's new disclosure was insufficient to establish that the proffered expert testimony is

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<sup>96</sup> Docs. 31, 49, 231.

<sup>97</sup> Docs. 291, 295, 296.

<sup>98</sup> Nov. 3, 2023 Mem. Op. 7-8.

<sup>99</sup> Nov. 3, 2023 Ord.

<sup>100</sup> Docs. 307, 309, 311.

reliable.<sup>101</sup> The Court also noted that the Government seemed to suggest that it could continue to supplement its disclosures to remedy any deficiencies.<sup>102</sup> The Court emphasized that the deadlines it sets are not optional, that Rule 16 required the Court to set a deadline, and it had set that deadline for December 1, 2023.<sup>103</sup> Nevertheless, given the relative infancy of as-amended Rule 16, the Court granted the Government another extension, requiring the disclosure of any relevant evidence or materials in its possession by February 15, 2024.<sup>104</sup>

And yet, given multiple opportunities over several months, the Government still failed to comply with Rule 16 or Orders of this Court.

It appears that the Government's incomplete disclosures may, at least in part, stem from a misunderstanding of what Rule 16 requires. For example, during the *Daubert* hearing the Government pushed back on the Court's suggestion that its disclosure as to Brandy Pulfer was inadequate under Rule 16:

I don't know what more, with respect to Ms. Pulfer I possibly could have provided to the Defense or to this Court. Her lab report was provided. The entire case file for how she reached those results was provided. Her Curriculum Vitae was provided, including the papers that she's published and prior testimony. It was all provided.<sup>105</sup>

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<sup>101</sup> Feb 1, 2024 Mem. Op. 7.

<sup>102</sup> *Id.* at 8.

<sup>103</sup> *Id.*

<sup>104</sup> *Id.* at 8-9.

<sup>105</sup> Tr. 5:20-6:1.

The Government's disclosure for Pulfer, less two paragraphs on her background, is as follows:

In connection with this matter, Ms. Pulfer prepared a Lab Report dated March 16, 2018 ("Pulfer Report"), which is attached as Exhibit B and has been previously provided to the defendants. She will testify in accordance with the Pulfer Report that she examined multiple items (listed on the report as Items 1 through 9 plus sub-items). Her conclusions from the analyses of these items are reported in the "Conclusion" section of this report in line items 1 through 15. Of particular note, Pulfer will testify that she tested the orange chunky substance in Item 5.1 and found that it tested positive for 3-methylfentanyl and weighed 16.12 grams.

Ms. Pulfer is further expected to testify that she applied scientifically accepted techniques and testing methods, as well as her knowledge, skill, experience, training, and education, to reach the opinions stated in her report.<sup>106</sup>

Also filed with the disclosure as exhibits were Pulfer's CV and her lab report. Pulfer's report is merely a list of items and her conclusions regarding what those items were. It says nothing about what analysis or testing Pulfer performed or how she examined the items.<sup>107</sup> Of particular note, it says nothing about how Pulfer "tested the orange chunky substance in Item 5.1 and found that it tested positive for 3-methylfentanyl and weighed 16.12 grams."<sup>108</sup> Nor does the disclosure mention Pulfer's case file or where in that file she describes the bases for her conclusions.

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<sup>106</sup> Second Expert Disclosures at 1-3.

<sup>107</sup> Doc. 306-2.

<sup>108</sup> Second Expert Disclosures at 2-3.

The Government's apparent confusion regarding the requirements of Rule 16, or at a minimum the Court's expectations, might be excusable if, when the Court required the Government to amend its disclosures, it had not explicitly noted *twice* that "[i]nformation previously provided need not be repeated in the expert disclosure, *if the expert disclosure clearly identifies the information and the prior report in which it was provided.*"<sup>109</sup>

So, what more could the Government have provided? For starters, an expert disclosure which complied with the Federal Rules of Criminal Procedure at any of the three times of asking.

It may well be that Pulfer's case file included the relevant information. Given that Bressi has stipulated to the admissibility of her testimony, that appears to be the case. But where Bressi has maintained his objections, the Court first looks to the disclosures provided by the Government to determine the admissibility of the proffered testimony. Where those disclosures remain deficient, Rule 16 provides that the court may:

- (A) order that party to permit the discovery or inspection; specify its time, place, and manner; and prescribe other just terms and conditions;
- (B) grant a continuance;
- (C) prohibit that party from introducing the undisclosed evidence; or
- (D) enter any other order that is just under the circumstances.<sup>110</sup>

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<sup>109</sup> Nov. 3 Mem. Op. 3, 6 (quoting Fed. R. Crim. P. 16, Adv. Comm. Notes 2022 Amendments).

<sup>110</sup> Fed. R. Crim. P. 16(d)(2).

The Third Circuit has instructed that, “[i]n determining an appropriate remedy, a district court should consider the reasons for the party’s delay . . . including whether it acted intentionally or in bad faith, and the degree of prejudice to the opposing party.”<sup>111</sup>

### 1. Bozenko

In support of their first motion to exclude his testimony, Defendants argued, and the Court agreed, that the Government’s initial disclosure said nothing about the “bases and reasons” for Bozenko’s conclusions regarding what certain chemicals could be used for.<sup>112</sup> In its subsequent disclosure, the Government described the bases for Bozenko’s conclusions as follows:

Mr. Bozenko will testify that his conclusions are based on his training and experience as a DEA chemist who specializes in clandestine laboratories, his firsthand experience with such laboratories, and his ongoing training in recent developments and trends in chemistry and clandestine drug manufacture. His testimony is based on principles and methods established in the field of chemistry and the principles and methods established for the seizure and analysis of clandestine laboratories. His testimony is based on common knowledge in these fields and his experience in applying and observing such principles. Mr. Bozenko’s involvement in the present matter is reflected in his correspondence with Agent O’Malley (Doc. 297, Exhibit A) and the transcript of his interview with Bressi, previously provided to the defense.

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<sup>111</sup> *U.S. v. Lee*, 573 F.3d 155, 161 (3d Cir. 2009) (citing *United States v. Ganier*, 468 F.3d 920, 927 (6th Cir. 2006); *Govt. of Virgin Islands v. Fahie*, 419 F.3d 249, 258-59 (3d Cir. 2005)).

<sup>112</sup> Nov. 3 Mem. Op. 5.



The Court previously held the Government’s assertion that Bozenko’s opinion is based on “common knowledge,” “principles and methods established in the field of chemistry and . . . for the seizure and analysis of clandestine laboratories,” to be so broad as to be meaningless because it says nothing about the principles and techniques themselves.<sup>113</sup> The Government’s (repeated) reference to testimony that organic chemistry “is pervasive in everyday modern life and it makes ‘the plastic seat you’re sitting in . . . the licit medications that you’re prescribed [and] the tires [on] your car,’” illustrates the point.<sup>114</sup> That organic chemistry “makes the plastic seat you’re sitting in” says little about the particular methods the experts relied upon to form their opinions in a case about the alleged manufacture of fentanyl.<sup>115</sup>

It is well settled that there are “circumstances where one’s training and experience will provide an adequate foundation to admit an opinion and furnish the necessary reliability to allow a jury to consider it.”<sup>116</sup> In cases where “an expert relies ‘solely or primarily on experience,’ he must explain ‘how that experience leads to the conclusion reached, why that experience is a sufficient basis for the opinion, and

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<sup>113</sup> Feb. 1 Mem. Op. 7-8.

<sup>114</sup> Doc. 349, at 7 (quoting Tr. 7).

<sup>115</sup> See *Daubert*, 509 U.S. at 593-94 (holding that peer review or “scrutiny” of the scientific community and general acceptance of scientific techniques *within* a relevant scientific community can bear on the reliability inquiry). Put differently, the relevant inquiry is not whether organic chemistry is an established field or subject to peer review but whether the specific methods applied by these experts meet those, or other indicia of reliability. That organic chemistry is generally subject to peer review says nothing about whether the specific methods applied by these experts in this case have been scrutinized or accepted by the relevant scientific community—that is, organic chemists.

<sup>116</sup> *Oddi v. Ford Motor Co.*, 234 F.3d 136, 158 (3d Cir. 2000).

how that experience is reliably applied to the facts.”<sup>117</sup> The Government’s disclosure says nothing about *how* Bozenko’s experience led him to his conclusions. But it did at least put Bressi on notice that Bozenko purported to rely on his experience and gave him a fair opportunity to examine Bozenko accordingly at the hearing.

What the disclosure does not do is give Bressi notice that Bozenko will testify at the hearing that he relied upon *Clandestine Manufacture* or any other outside sources in forming his opinions. The failure to do so is a violation of Rule 16 and this Court’s Orders.

The Court believes that the Government’s repeated failures to comply with Rule 16 and the Court’s Orders demonstrate an alarming lack of respect for the Court, Bressi and his counsel, and the Government’s own experts. It does not find, however, that the belated disclosures were intentional or delayed in bad faith. On the contrary, it seems to the Court that the Government’s noncompliance stems from a failure to act intentionally.

The Court also finds that the failure to timely disclose Bozenko’s reliance on *Clandestine Manufacture* was harmless.<sup>118</sup> The Court ultimately agrees with the

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<sup>117</sup> *In re Lincoln Nat’l COI Litig.*, 620 F.Supp. 3d 230, 244 (E.D. Pa. 2022) (quoting Fed. R. Evid. 702, Adv. Comm. Notes 2000 Amendments); *see also Whyte v. Stanley Black & Decker, Inc.*, 514 F.Supp. 3d 684, 695-96 (W.D. Pa. 2021). (expert conclusions excluded where he provided no explanation of how he applied experience or methodology to facts of the case).

<sup>118</sup> *See Karma Automotive LLC v. Lordstown Motors Corp.*, No. SACV202104JVSDFMX, 2023 WL 6814583, at \*3-4 (C.D. Cal. Aug. 15, 2023) (denying motion to exclude expert opinion which relied on previously undisclosed legal treatises and industry articles where the failure to disclose was harmless); *U.S. v. Tanguay*, 895 F. Supp. 2d 284, 290 (D.N.H. 2012) (denying motion to exclude witness testimony where untimely disclosure did not prejudice defendant).

Government that the publication is reliable. Bozenko testified that the “synthetic routes” described in the book have “been executed many times by our laboratory and other laboratories.”<sup>119</sup> *Clandestine Manufacture* has been updated and used by law enforcement agencies around the world for over thirty years.<sup>120</sup>

As to the second step of the reliability inquiry—whether Bozenko’s testimony reflects a reliable application of the reliable principles—the Court also agrees with the Government that there is no “application” to evaluate. Bozenko’s proffered testimony is simply that certain chemicals may be used to synthesize fentanyl. The relevant excerpt of *Clandestine Manufacture* consists of seven “schemes” for synthesizing fentanyl.<sup>121</sup> Those schemes are illustrated via a chemical diagram wherein each chemical is named beneath the diagram. Bozenko’s conclusions flow from simply comparing the list of chemicals provided to him by Agent O’Malley to the chemicals identified in the book. Upon its own review, the Court was able to identify several of the chemicals which appeared in both lists.

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<sup>119</sup> Tr. 55:21-25.

<sup>120</sup> See U.S. Dept. of Justice, *NCJRS Virtual Library: Clandestine Manufacture of Substances Under International Control* (accessed June 28, 2024), <https://www.ojp.gov/ncjrs/virtual-library/abstracts/clandestine-manufacture-substances-under-international-control#0-0> (entry for manual listing date of original publication as 1987); United Nations, *supra* n.83 (noting revisions and addendums of 2013 and 2018).

<sup>121</sup> Gov’t. Hr’g. Exh. 2.7.

## 2. Patrick

In her report, Patrick “described the chemical steps necessary to manufacture fentanyl, acetyl fentanyl, and carfentanil and linked these steps to items found in the laboratory.”<sup>122</sup> Patrick also illustrated the chemical steps in a slide deck.<sup>123</sup> As to certain of the methods, Patrick included in her slide deck the source material she relied upon for the chemical steps to produce the relevant substance.<sup>124</sup> However, as to other methods illustrated in Patrick’s report and slide decks, she relied upon sources which were not provided to Bressi until the lunch break on the day of the hearing.<sup>125</sup>

The extent of Patrick’s “analysis” here appears to be no more than that of Bozenko. Patrick testified that she was simply comparing the “ingredients” of processes for synthesizing fentanyl, acetylfentanyl, and carfentanil to what was found at the SHIVA lab.<sup>126</sup> However, except to the extent that Patrick also relied on *Clandestine Manufacture*, the Court cannot conclude, based on the record before it, that the source material itself is reliable. Patrick was unable to confirm that the

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<sup>122</sup> Second Disclosure at 5; *accord* Patrick Report at 4-5.

<sup>123</sup> Second Disclosure at 5; *see also* Gov’t Hr’g Exhs. 3.3, 3.4 (Fentanyl synthesis slide decks).

<sup>124</sup> *E.g.*, Gov’t Exh. 3.3, at 1; Gov’t Exh. 3.4 at 2.

<sup>125</sup> Tr. 166:1-5.

<sup>126</sup> *Id.* at 165:3-9.

additional sources were peer reviewed.<sup>127</sup> Nor is it clear that those sources have been tested or ratified in a manner akin to those included in *Clandestine Manufacture*.

The Court also finds that the prejudice to Bressi—the inability to review and inquire into the reliability of the underlying source material—cannot be ameliorated. This case has been pending for over five years. The instant dispute over expert testimony has dragged on for a year. The Court is unwilling to further delay the proceedings as would be required to afford Bressi sufficient time to review and inquire into the reliability of the belatedly disclosed sources. Nor is the Court willing to countenance the repeated failures to comply with the deadlines set by this Court. To do so would frustrate the very purpose of the amendments to Rule 16.<sup>128</sup>

Patrick may not offer testimony which is based upon sources which were disclosed for the first time at the April 22, 2024 *Daubert* hearing.

## **B. Qualifications**

In his brief in support of the *Daubert* Motion, Bressi argued that Patrick and Bozenko “do not have sufficient expertise to testify regarding the synthesis of controlled substances.”<sup>129</sup> As to Patrick, Bressi suggests that her experience is limited to “the analysis of substances to determine whether controlled substances are

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<sup>127</sup> *Cf id.* at 165:23-25 (Q: [D]o you know if those additional sources were peer-reviewed, Ms. Patrick? A: I believe so.”).

<sup>128</sup> *See* Fed. R. Crim. P. 16, Advisory Comm. Notes 2022 Amendments (noting that the Rule was amended to “address[] . . . the lack of an enforceable deadline for disclosure”).

<sup>129</sup> Doc. 310, Section II.

present,” not “the process of manufacturing fentanyl or its analogues, even though she may be able to identify certain chemicals, compounds, and controlled substances and has been trained on how to investigate and collect samples in a clandestine laboratory.”<sup>130</sup> Regarding Bozenko, Bressi directs the Court to an email to FBI Agent O’Malley in which Bozenko states:

I think Ms. Patrick did well in the relation of her analytical work to the likely targets of the clandestine lab. I’m unsure I could comment further. As for the second paper . . . I may need to consult with a colleague of mine who is more fluent in the specific organic chemistry discussed.<sup>131</sup>

Bressi suggests that Bozenko’s “lack of fluency” evidences that his testimony, as well as that of Patrick, “goes beyond their expertise.”<sup>132</sup>

At the hearing, the Court pressed Bressi on this argument:

So if I understand from your papers, the thrust of your objections . . . is that [the experts do not] possess requisite experience. But our Circuit has set forth a fairly forgiving standard as to that prong of the Federal Rule of Evidence 702 inquiry, which I’d note was not modified by recent amendment. So why shouldn’t this Court be satisfied that [the experts] possess the broad range of knowledge, skills, and training that the rule requires?<sup>133</sup>

Bressi responded that “it’s a matter of to what extent [they have] the knowledge, skills, and training to testify here.”<sup>134</sup> He noted that both Bozenko and Patrick testified that certain topics were beyond the scope of their expertise,

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<sup>130</sup> *Id.* at 4-5.

<sup>131</sup> *Id.* at 5 (quoting Doc. 297-1, at 47).

<sup>132</sup> *Id.*

<sup>133</sup> Tr. 193:5-13.

<sup>134</sup> *Id.* at 193:14-16.

familiarity, or capability.<sup>135</sup> In his supplemental brief, Bressi identifies several such topics. The Court addresses, and rejects, Bressi's arguments as to each in turn.

Bressi argues that Bozenko's and Patrick's "expertise is limited with respect to the synthesis of fentanyl and its analogs."<sup>136</sup> Regarding the latter, that Patrick has never personally synthesized fentanyl is not a reason to deem her unqualified. As to Bozenko, Bressi points to testimony where he conceded that his "detailed knowledge of acetylfentanyl production isn't as deep" as with fentanyl.<sup>137</sup> Even if the Court took Bozenko's testimony as a disclaimer of his expertise, that is insufficient to render him unqualified.<sup>138</sup> Looking beyond this single exchange, the Court finds Bozenko's, and Patrick's for that matter, formal qualifications unassailable.<sup>139</sup>

Further, in context, Bozenko's testimony does not betray the lack of expertise Bressi suggests. The cited testimony was elicited in response to a question regarding a chemical diagram, apparently drawn by Bressi, and shown to Bozenko for the first time during the hearing.<sup>140</sup> Bozenko's ability to ratify Bressi's conclusions is of little significance; the inquiry is whether Bozenko is qualified to testify as to his own conclusions—not Bressi's.

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<sup>135</sup> *Id.* at 193:17-21-194:14.

<sup>136</sup> Doc. 348, at 6.

<sup>137</sup> Tr. 101:8-13.

<sup>138</sup> *Watson v. United States*, 485 F.3d 1100, 1105 (10th Cir. 2007).

<sup>139</sup> *Pineda*, 520 F.3d at 244-45.

<sup>140</sup> Hr'g. Def. Exh. 4.

Bressi's other attacks on Bozenko's qualifications fail for the same reasons. Bressi's argues that Bozenko "is largely unfamiliar with"—and therefore unqualified to testify regarding—"the legitimate uses of [the identified] chemicals in general."<sup>141</sup> As disclosed by the Government, Bozenko is expected to testify regarding dozens of chemicals "that have a wide array of applications (including licit and illicit uses)."<sup>142</sup> Bozenko need not identify every application, licit and illicit, of each chemical to establish that he is qualified to testify regarding the "wide array" of uses for each solvent or reagent.<sup>143</sup> Whether Bozenko is qualified to ratify or disprove Bressi's theory of the case is largely irrelevant.

The Court also disagrees that Bozenko is not qualified to "testify that SHIVA was a clandestine lab as opposed to a research lab."<sup>144</sup> Bozenko is certainly qualified to testify whether the SHIVA lab was capable of producing fentanyl and its analogues. While Bressi can argue to a jury that SHIVA was, in fact, designing and manufacturing "Dazzle Coating," or curing cancer, the law does not require that the prosecution's experts help him prove his case.

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<sup>141</sup> Doc. 348, at 7.

<sup>142</sup> Second Disclosures, at 8.

<sup>143</sup> See *Kannankeril v. Terminix Intern., Inc.*, 128 F.3d 802, 809 (3d Cir. 1997) ("If the expert meets liberal minimum requirements, then the level of the expert's expertise goes to credibility and weight, not admissibility.").

<sup>144</sup> Doc. 348, at 8.



## C. Reliability

Bressi also raises a number of objections to the reliability of Patrick's methods and their application. Those challenges fall into three categories; 1) a failure to test certain substances recovered from SHIVA; 2) the reliability of the testing that was performed; and 3) Patrick's reliance on a drug yield calculator. The Court addresses each in turn.

### 1. Failure to Test

Bressi faults Patrick for failing to test certain items recovered from the Shiva lab.<sup>145</sup> Patrick testified that a full, unopened containers of certain chemicals were not tested to confirm their contents.<sup>146</sup> Insofar that Patrick merely relied upon the label of a container to determine its contents, she is not offering the sort of opinion which is subject to a *Daubert* analysis. One need not be a chemist or know what 4-piperidone is to understand that a container labeled "4-piperidone" likely contains 4-piperidone. To the extent that Patrick then offers any expert opinions based on the recovery from the lab of 4-piperidone, or any other substances identified by the label of their containers, the Court finds by a preponderance of the evidence that those opinions reflect a reliable application of the relevant principles and methods to the facts of the case.

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<sup>145</sup> *Id.* at 9 ¶¶ 1-2.

<sup>146</sup> Tr. 184:3-186:16.

Bressi can certainly argue to a jury that the sealed containers did not contain the substances advertised on their labels. He can then implore the jury to reject any conclusions based on the presence of the improperly identified substances. But those are arguments to be presented to the jury at trial, not the Court on a *Daubert* motion.

## 2. Methods of Testing

Bressi offers two arguments in support of his position that Patrick's methods for determining the quantity, yield, and composition of the substances she tested are unreliable: 1) Patrick "was unable to explain the volume, quantity or reason for the ratios selected in the mixture of the standards"; and 2) she "does not know the concentration of the standard substances she is running as controls, or even the size of the test tubes she is using to run samples."<sup>147</sup>

During the hearing, Patrick explained that samples were tested in a gas chromatography and mass spectrometry machine.<sup>148</sup> The results were then compared to a "library sample," or the results from a known substance.<sup>149</sup> There are different libraries available to which chemists can compare samples.<sup>150</sup> Here, that also includes the Bethlehem library, or the library for Patrick's lab.<sup>151</sup> In cases where a

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<sup>147</sup> Doc. 348, at 9 ¶¶ 3-4.

<sup>148</sup> Tr. 117:13-19.

<sup>149</sup> *Id.* at 132:20-133:2.

<sup>150</sup> *Id.* at 133:8-19.

<sup>151</sup> *Id.*

test matched a sample from an outside library, Patrick would then order a “standard” to run on her machine to ensure the accuracy of the results.<sup>152</sup>

Patrick also testified that it is common to run multiple standards at the same time.<sup>153</sup> When substances are mixed and tested, the different substances will result in distinct “peaks.”<sup>154</sup> In instances where the peaks overlap, Patrick “shift[s] to another method” so that the “two standards come out separate so that [she] can identify them individually.”<sup>155</sup> Further, Patrick testified that estimating, rather than measuring known samples has no impact on the final result because the test indicates merely which substances are present, not the ratio or amount.<sup>156</sup>

Accordingly, the Court finds that Patrick has established the reliability of her methods by a preponderance of the evidence.

### **3. Yield Calculator**

Bressi suggests that Patrick’s testimony regarding the potential yield is neither reliable nor reproducible because she cannot verify the accuracy of the tool that she utilized to determine the purported yield.<sup>157</sup> Bressi cites to no authority, nor is the Court aware of any, which requires an expert to independently verify or be

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<sup>152</sup> *Id.* at 120:1-19.

<sup>153</sup> *Id.* at 187:24-8.

<sup>154</sup> *Id.* at 188:9-189:14.

<sup>155</sup> *Id.* at 188:15-19.

<sup>156</sup> *Id.* at 188:23-189:5.

<sup>157</sup> Doc. 348, at 10.

“intimately familiar with”<sup>158</sup> the validity of each tool, formula, or calculation that she relies on.<sup>159</sup> By way of example, while Patrick must understand how to use a gas chromatography mass spectrometry machine and interpret results, she need not establish expertise regarding the physics by which the machine operates or be able to design and build one herself.<sup>160</sup>

Among the factors that the Third Circuit has instructed courts to take into account in deciding the reliability of expert testimony is “whether a method consists of a testable hypothesis”; “the known or potential rate of error”; “the existence and maintenance of standards controlling the technique’s operation”; “whether the method is generally accepted”; and “the non-judicial uses to which the method has been put.”<sup>161</sup>

Patrick testified that the calculator she used was created by the Clandestine Lab Investing Chemists Association.<sup>162</sup> She testified regarding the sources that the

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<sup>158</sup> Cf. Tr. 159:17-21.

<sup>159</sup> Cf. *Wendell v. GlaxoSmithKline LLC*, 858 F.3d 1227, 1235 (9th Cir. 2017) (observing that other, objective, verifiable evidence that testimony is based on scientifically valid principles can establish reliability in the absence of independent research); *In re Viagra (Sildenafil Citrate) and Cialis (Tadalafil) Products Liab. Litig.*, 424 F. Supp. 3d 781, 791 (N.D. Cal. 2020) (“[W]hile the fact that the experts presented by plaintiffs reached their conclusions . . . only from a review of the work of others may weigh slightly against a finding of sufficient reliability, it does not tip the balance in favor of exclusion.”).

<sup>160</sup> The Court emphasizes that this is an issue distinct from potential concerns regarding a machine’s calibration or accuracy, which are not implicated here.

<sup>161</sup> *Paoli*, 35 F.3d at 742 n.8.

<sup>162</sup> Tr. 136:8-16, 147:12-19.

calculator relies upon.<sup>163</sup> She testified how she used the calculator.<sup>164</sup> She testified that the calculator is validated periodically.<sup>165</sup> Patrick also noted that the yield was an estimate or “theoretical.”<sup>166</sup>

The Court therefore finds by a preponderance of the evidence that Patrick’s opinions based on the yield calculator are reliable and that they will aid the jury in understanding and resolving the facts of the case.

## VI. CONCLUSION

For the foregoing reasons, Bressi’s *Daubert* Motion is denied in part and granted in part.

An appropriate Order follows.

BY THE COURT:

*s/ Matthew W. Brann*

Matthew W. Brann

Chief United States District Judge

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<sup>163</sup> *Id.* at 138:16-19.

<sup>164</sup> *Id.* at 153:20-154:22.

<sup>165</sup> *Id.* at 160:3-7.

<sup>166</sup> *Id.* at 154:23-12.